

REMARKS

The specification has been amended for clarity.

Claim 1 has been amended to better define over the art of record, and includes, inter alia, the limitation of claim 2.

Claims 1-5 and 8 stand rejected under 35 U.S.C. §102 as being anticipated by Pei U.S. 6, 230,789 or Lee U.S. 6,176,304. To the extent that this rejection would be applied to claims as presently amended, it is traversed for the reasons following.

Pei discloses a heat dissipating device including a folded fin 10 and a base plate 20 which is fixed across between faces 144 of the folded fin; the base plate 20 is intended to be mounted to the top of a CPU of a computer. Lee discloses a heat sink including a folded fin member 20 and a base 10 having a top surface 13 and ribs 14 which fit between sidewalls 24 of the member 20. The base 10 is intended to be mounted to the top of an electronic device such as a CPU in a computer. In both of these references, it is desired to maximize the contact area between the base and the component by using a full base having a large contact area with the component. Dividing the base into discrete elements would defeat this teaching.

Thus, neither Pei nor Lee discloses or suggests, and on the contrary they teach away from, discrete conductive elements fixed to the bottom surfaces of mounting lands, because this would not maximize the contact area by having a full base having a large contact area with the component whose heat is being dissipated.

The present invention, on the other hand, is directed to a heat sink device which can be soldered to a circuit board over a component which is independently mounted to the circuit board; the heat sink is not intended to be fixed to the component. Rather, the heat sink protects the component while permitting air to flow around it, thereby providing heat dissipation by convection, in addition to conduction (via the circuit board) and radiation.

Since claim 1 as presently amended distinguishes patentably from Pei and Lee, it is not deemed necessary to address the rejections of dependent claims citing additional references. However the statement that the process limitation of claim 8 bears no patentable weight needs to be addressed.

The recitation in claim 8 that the heat sink body is extruded is just as much of a structural limitation as the recitation in claim 5 that the heat sink body is formed from a sheet of aluminum. A person skilled in the art would readily recognize the extruded product by its structure, which is readily distinguishable from a formed sheet. A product by process claim is a product claim which defines the claimed product in terms of the process by which it is made. Claim 8 is such a claim, and lies squarely within the holding of In re Pilkington, 162 USPQ 145 (CCPA 1969). See also MPEP 2173.05(p).

The claims as amended being definite and patentable over the art of record, withdrawal of the rejections and early allowance are solicited. If any objections remain, a call to the undersigned is requested.

It is believed that no fees or charges are required at this time in connection with the present application; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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